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EXAMINER

NATNAEL, PAULO M

ART UNIT

PAPER NUMBER

2614

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/639,574

Applicant(s)

MIDDLETON ET AL.

Examiner

Paulos M. Natnael

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities: the hyper-link to [www.atvef.com](http://www.atvef.com) cannot appear in a printed patent. Appropriate correction is required.

### *Claim Objections*

2. Claims 1-11 are objected to because of the following informalities: In claim 1, the phrase "...and separate ancillary television signals said related to said main signals" should read "...and separate ancillary television signals related to said main signals". In Claim 6, the phrase "...includes means for responsive to said control data" should be "...includes means responsive to said control data". Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims **1, 3-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Dougherty et al., U.S. Pat. No. 5,737,025.**

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Considering claim 1, Dougherty et al disclose the following claimed subject matter:

a) a television broadcast transmitter including means for generating and transmitting main television signals and <sup>no separate channels</sup> separate ancillary television signals said related to said main signals is met by Program Source 14, encoder 12-1, and encoder 12-2, FIG. 1;

b) a television receiver system for receiving said main signals and for storing in a cache memory the ancillary signals is met by the decoder, Figs. 1 and 4;

Except for;

c) selective means at the television receiver for providing either the main signals or the ancillary signals to the television display.

Regarding c), Dougherty et al do not specifically disclose selection means for selectively providing the main signals and the ancillary signals to the television display. However, the Examiner takes an Official Notice in that it is well known in the art to selectively provide either the main video signal or other auxiliary or ancillary data to the TV display monitor, and therefore, it would have been obvious to the skilled in the art to modify the system of Dougherty et al. to provide a switch or a selector in order to selectively provide the video signal and the ancillary data to the monitor or display efficiently.

Considering claim 3, wherein said ancillary signal is broadcasted in the vertical blanking interval of the main signal and said receiver receives the ancillary signal during the

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vertical blanking interval is met by the disclosure "The ancillary signal is injected during the vertical blanking interval of each receivable television signal." (col. 3, lines 16-17)

Considering claim 4, the system of claim 1 wherein said television signals are transmitted over a digital television channel subdivided into several subchannels of multiplexed signals and wherein one of said subchannels contains said main television signals and the other sub-channels provide the ancillary signals.

Regarding claim 4, it is well known in the art that television signals in the DTV or HDTV format, for example, are transmitted as multiplexed signals. Dougherty et al do not specifically disclose a digital television channel. However, Dougherty et al disclose that their invention overcomes the problem of losing ancillary data when a digital data compression methodology in composite video signals is used. (see col. 4, lines 47-63) Dougherty et al also teach that the ancillary signal code "is inserted by the inserter 46 into a narrow, non-interfering frequency band within the bandwidth of the composite video signal..." (col. 8, lines 5-10) Therefore, it would have been obvious to the skilled in the art at the time the invention was made to modify the system of Dougherty in order to process multiplexed broadcasting signals in the digital domain, so that the insertion of ancillary data is made efficient in the sub-divided channels containing main television signal and sub-channels for the ancillary or auxiliary data.

Considering claim 5, wherein said main sub-channel carries the control data for commands for updating by removing old sub-channel segments and storing new ones.

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Regarding claim 5, Dougherty et al do not disclose whether the control data for commands for updating by removing old sub-channel segments and storing new ones. However, the Examiner takes Official Notice in that, as the specification for the ATVEF standard stipulates, it is well known in the art to send command/control signals using lines in the Vertical Blanking Interval (VBI) to manage the cache, and it is also well known in the art to update systems (storage or otherwise) by removing/deleting old video/audio segments and replacing it with new segments or parts. Therefore, it would have been obvious to the skilled in the art at the time the invention was made to modify the system of Dougherty et al using the teaching of the ATVEF specification and the prior art in order to give the user an advantage of efficient use and flexibility in storage systems.

Considering claim 6, wherein said separate ancillary signal contains short television signal segments related to the main signals, and said cache stores said segments and said main signals and contains control data providing means for removing and storing said segments and said receiver system includes means responsive to said control data for storing and removing said short segments from said cache;

Regarding claim 6, see rejection of claim 5;

Considering claim 7, the system of Claim 1 wherein said ancillary signals include ancillary data and command and control signals is met by the disclosure, "This ancillary

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code may be the data, such as the network ID or the local TV station ID." (col. 7, lines 47-49)

Considering claim 8, wherein said main signals are data compressed signals and the ancillary signals are in the sideband channels between said main signals is met by the disclosure that the ancillary signal code "is inserted by the inserter 46 into a narrow, non-interfering frequency band within the bandwidth of the composite video signal..." (col. 8, lines 5-10; see also col. 4, lines 47-63)

Considering claim 9, the system of Claim 1 wherein said main signals are data compressed segments and the ancillary signals are in the sidebands between said main signals.

Regarding claim 9, see rejection of claim 8.

Considering claim 10, wherein said main signals and ancillary signals are different parts of a high definition television channel;

Regarding claim 10, Dougherty et al do not specifically disclose that the main signals and ancillary signals are different parts of a high definition television channel. However, the Examiner takes an Official Notice in that it is well known in the art that ancillary signals are also transmitted as part of HDTV television signals and, thus, it would have been obvious to those with ordinary skill in the art at the time the invention

was made to modify the system of Dougherty to provide an HDTV signal in order to minimize the cost of a separate transmission and make it convenient to the user.

Considering claim **11**, means for switching between high definition television channel and one standard television sub-channel and an ancillary sub-channel.

Regarding claim 11, see rejection of claims 1(c) and 10.

5. Claim **2** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Dougherty** et al., U.S. Pat. No. 5,737,025 in view of **Yasuki** et al., U.S. Pat. No. 6,285,407.

Considering claim **2**, the claimed means for generating an icon on a television receiver display indicating the presence of the stored ancillary signals and means at the television receiver for accessing said stored ancillary signal in said cache memory using said icon.

Regarding claim 2, Dougherty et al. discloses a co-channel transmission of program signals and ancillary signals. Dougherty et al. do not specifically disclose an icon that would be displayed on screen of the TV to indicate the presence of an ancillary signal.

Yasuki et al. disclose a multi-function TV receiver in which the receiver is capable of processing both an object transmitted through broadcasting and an object which is derived from other means. The system of Yasuki discloses a VBI processor that



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processes the VBI data multiplexed and transmitted with the broadcast video data.

Yasuki et al also disclose "the graphic controller 135 is controlled to display an icon or a message on the screen" so that the "user is able to recognize there was an automatic answering and recording."

Therefore, it would have been obvious to the skilled in the art at the time the invention was made to modify the system of Dougherty by providing Yasuki's capability of displaying an icon on the screen, in order to make the user aware of the presence of a particular (ancillary) data or information that could be retrieved from memory or transmitted with the input video signal, should the user chooses to do so, giving the user a choice and an advantage instead of searching for the information or data.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lu et al., U.S. Pat. No. 5,737,026 discloses a video and data co-channel communication system where the ancillary data is modulated onto a carrier frequency and combined with the video signal at the output of the encoder.

Moses et al., U.S. Pat. No. 6,035,177 discloses a simultaneous transmission of ancillary and audio signals.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paulos M. Natnael whose telephone number is (703) 305-0019. The examiner can normally be reached on 6:30am -3pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (703) 305-4795. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Paulos M. Natnael

February 9, 2003

*Pmn*



**JOHN MILLER**  
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